THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GEORGE E. CHADIMA, JR.
and VADIM LASER

Appeal No. 1997-3481
Application 08/476,543[1]

ON BRIEF

Before BARRETT, FLEMING, and DIXON, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

---

[1] Application for patent filed June 6, 1995, entitled "Instant Portable Bar Code Reader."

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 15-26.

We reverse.

BACKGROUND

The invention is directed to a portable bar code reader that can automatically discriminate between a plurality of different bar code types.

Claim 15 is reproduced below.

> 15. A portable bar code reader system capable of reading bar codes of a plurality of bar code types, said reader system comprising:
>
> (a) a hand-held bar code reader unit;
>
> (b) said hand-held bar code reader unit having a bar code sensing region, and having a window to be directed toward a bar code of one of a plurality of bar code types in said sensing region and providing for transmission of light between the bar code sensing region and the interior of said hand-held bar code reader unit;
>
> (c) a photodetector positioned within said hand-held bar code reader unit for sensing light reflected from a bar code located within said bar code sensing region, so as to generate a bar code signal representing the illuminated bar code;
>
> (d) said hand-held bar code reader unit having a light path from the window to the photodetector, said light path oriented to permit said photodetector to sense light reflected from the bar code along said path while the reader unit is variably spaced from the bar code and

free of any contact with the bar code as a whole during reading of a complete line of bar code information;

(e) a printed circuit board in said hand-held bar code reader unit having circuitry thereon connected with said photodetector, said circuitry receiving said bar code signal generated by said photodetector; and

(f) a bar code signal processor located in said hand-held reader unit responsive to said bar code signal for determining the type of bar code in said sensing region and for decoding the information contained in said bar code signal into a usable form, said processor permitting the successive reading of different ones of said bar code types.

The Examiner relies on the following prior art references:

Dobras 4,115,703 September 19, 1978
McWaters et al. (McWaters) 4,118,687 October 3, 1978
Sakai 4,210,802 July 1, 1980
Swartz et al. (Swartz '798) 4,251,798 February 17, 1981
Chadima, Jr. et al. (Chadima) 4,282,425 August 4, 1981

Knowles, Data Acquisition Through Portable Laser Scanners, Code and Symbol, April 1976, pp. 13, 14, 18.

Claims 15-26 stand rejected under 35 U.S.C. § 112, first paragraph, based on a lack of enabling disclosure.

Claims 15-26 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly

point out and distinctly claim the subject matter which applicant regards as his invention.

Claims 15-26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Dobras, McWaters, Sakai, Swartz '798, Chadima, and Knowles.

We refer to the first Office action (Paper No. 3), the Final Rejection (Paper No. 7), the Examiner's Answer (Paper No. 10) (pages referred to as "EA__"), and the Supplemental Examiner's Answer (Paper No. 12) (pages referred to as "SEA__") for a statement of the Examiner's position and to the Brief (Paper No. 9) (pages referred to as "Br__") and the Reply Brief (Paper No. 11) (pages referred to as "RBr__") for Appellants' arguments thereagainst.

OPINION

35 U.S.C. § 112, first paragraph

As a procedural matter, as discussed by Appellants in their Reply Brief, the Examiner did not repeat the § 112 enablement rejection from the first Office action in the Final Rejection. Under Patent and Trademark Office rules, Appellants could consider the rejection withdrawn since they were not repeated. See 37 CFR § 1.113(b) (1995). The

Examiner resurrected the rejection in the Examiner's Answer and added additional arguments; it was not stated whether the omission of the rejection in the Final Rejection was due to accident, inadvertence, carelessness, or intent. Appellants' Reply Brief, which addresses the enablement issue and submits a declaration, is considered proper and has been entered.

The Examiner asserts that the claimed auto-discrimination feature for reading bar codes of a plurality of bar code types is not disclosed and, therefore, not enabled (EA2-3).

Appellants argue that the auto-discrimination feature is disclosed in the computer program listing, which is part of the specification according to 37 CFR § 1.96(a)(2)(ii) (RBr5).

Page 40 of the specification states that the computer program listing has been submitted pursuant to 37 CFR § 1.96(a)(2)(ii). The program listing was originally filed with ancestor Application 06/334,811 and the program listing is clearly part of the specification on which Appellants are entitled to rely. However, we note that while 37 CFR § 1.96(a) deals with material that will be printed in the patent, the appendix has never been published as part of any of the patents that have issued from the chain of

applications. The appendix has apparently been treated as an appendix that is not part of the printed patent under § 1.96(b). We find no disclosure of auto-discrimination in the specification itself. We agree with the Examiner's comments (at EA3) that the portion of the disclosure at page 16, lines 13-21, mentioned in the Brief (Br3), has nothing to do with auto-discrimination. While Appellants are entitled to rely on the disclosure in the appendix, the description portion of the specification should be amended to describe the auto-discrimination functionality described in the appendix so that persons reading the patent will have a self-contained document that enables the claimed subject matter. See 37 CFR § 1.96 ("Descriptions of the operation and general content of computer program listings should appear in the description portion of the specification.").

The Examiner states that "page 38 of the computer printout does not have sufficient clarity to positively determine exactly what is happening" (EA3) and "[p]age 38 of the computer printout sensibly relates to nothing disclosed" (EA3). The Examiner is apparently responding to statements made in the response to the first Office action.

Appellants argue that page 38 of the computer printout appendix, which shows a "DECISION TREE FOR DETERMINING BARCODE TYPE," and the accompanying comments explaining the relevant code sections disclose the claimed functionality (RBr6). Appellants also argue that the Declaration of James E. Waite establishes that the patent application as a whole enables a person of ordinary skill in the art to make the claimed invention (RBr6).

We agree with Appellants that the computer printout at pages 38+ is sufficient to enable one of ordinary skill in the art to implement the auto-discrimination function. The printout describes a series of steps to discriminate between different bar codes and provides a working program. The Examiner's statements are purely conclusory and do not provide particular reasons why one of ordinary skill in the art could not make the claimed subject matter given the program.

The Examiner further states that "the various recitations of the dependent claims have never been shown to have been clearly, completely and cogently discussed in the specification" (EA4).

Appellants point out the support for the limitations of the dependent claims in the disclosure (RBr8-9). Appellants argue that "since the Examiner has pointed to no language in the dependent claims which is indefinite or 'nebulous' and since the claims are clearly supported by the specification, Applicants submit that the dependent claims satisfy the requirements of 35 U.S.C. § 112" (RBr9).

It is not clear exactly what statutory ground of rejection the Examiner is relying upon, but appears to be more related to the first paragraph of § 112 than the second paragraph. The stated § 112 rejection is based on lack of enablement, but the Examiner seems almost to making a lack of written description rejection. In any case, however, Appellants have pointed out the support in the specification and we find such support convincing. The Examiner did not respond to Appellants' arguments in his Supplemental Examiner's Answer and has not explained why the subject matter of the dependent claims is not enabled.

For the reasons stated above, we reverse the rejection of claims 15-26 under 35 U.S.C. § 112, first paragraph.

35 U.S.C. § 112, second paragraph

Again, as discussed by Appellants in their Reply Brief, the Examiner did not repeat the § 112, second paragraph, rejection from the first Office action in the Final Rejection. The Examiner resurrected the rejection in the Examiner's Answer and added additional arguments. Appellants' Reply Brief addressing the § 112, second paragraph, issue is considered proper.

The Examiner considers the claims indefinite because the "[c]laims tend to be couched in terms of desired results rather than structure" (EA2). The Examiner further states (EA3): "Subparagraph[s] (f)[,] (e) and (g) of claims 15,[ ]25, and 26[,] respectively[,] contain the misdescriptive language. The dependent claims are equally nebulous when compared with the disclosure."

Appellants argue that the Examiner appears to be objecting to the use of functional language interspersed with the recitation of structure, and that functional language as such is permissible (RBr7).

While functional language not associated with any structure may be indefinite, here the functions recited in the

claims are functions of the "bar code signal processor" in paragraph (f) of claim 15, the "circuitry including a microprocessor" in paragraph (e) of claim 25, and the "control circuitry" in paragraph (g) of claim 26. There is not a problem under 35 U.S.C. § 112, second paragraph. The rejection of claims 15, 25, and 26 is reversed.

The Examiner states that the "dependent claims are equally nebulous when compared with the disclosure" (EA3).

As discussed above, Appellants point out the support for the limitations of the dependent claims in the disclosure (RBr8-9). Appellants argue that "since the Examiner has pointed to no language in the dependent claims which is indefinite or 'nebulous' and since the claims are clearly supported by the specification, Applicants submit that the dependent claims satisfy the requirements of 35 U.S.C. § 112" (RBr9).

We have reviewed the dependent claims and disagree with the Examiner that the language of the dependent claims is indefinite or misdescriptive. The Examiner's statement the dependent claims are "nebulous" is not specific and we do not

see what language the Examiner is concerned with. The rejection of dependent claims 16-24 is reversed.

35 U.S.C. § 103

The rejection

Initially, we must straighten out what prior art the rejection is based upon.

In the first Office action, the Examiner stated the rejection as follows (Paper No. 3, page 3):

> Claims 15-26 are rejected under 35 U.S.C. § 103 as being unpatentable over the prior art of record in the parents and as set forth it [sic] previously with the addition of Swartz (4,251,798) and Sanner) [sic].
>
> Note col.[ ]5, lines 9-17 of '98 and fig. 1(a) of Sanner cumulative to Swartz (4,593,186) "different" bar codes.

As noted by Appellants (Br5), there were approximately 50 references of record in related applications. Appellants state that since it is unlikely that the Examiner suggests a rejection based on a combination of 50 references, they take the position that the rejection was based solely on Swartz '798, Swartz, U.S. Patent 4,593,186 (Swartz '186), and Sanner (Br5).

In the Final Rejection, the Examiner states (FR2):

> Claims 15-26 are rejected under 35 U.S.C. § 103 as being unpatentable over [?] set forth previously with the addition of the publications now cited.
>
> The IDS [citing the Knowles article] and the "appendix" [presumably referring to the appendix to the response filed February 29, 1996, Paper No. 6] clearly indicates that reading of plural codes were in the province of [M]etrologic.

The IDS cites the Knowles article, where Knowles is the President of Metrologic Instruments, Inc. The appendix to Paper No. 6 contains (1) an internal memorandum dated November 25, 1981, between employees of Symbol Technologies, Inc., the assignee of the Swartz '798 and '186 patents, which discusses the Metrologic MS 131 Laser Data Terminal (hereinafter "the Symbol Memorandum"), and (2) a copy of an Operator's Manual for the Metrologic MS 131 Laser Data Terminal having a revision date of October 1982 (hereinafter "the Metrologic Product Manual").

Appellants state their belief (Br6) that the final § 103 rejection appears to be over the combination of Swartz '798, Swartz '186, Sanner, the Knowles article, the Symbol Memorandum, and the Metrologic Product Manual. Appellants argue that the Symbol Memorandum and the Metrologic Product

Manual are not prior art (Br7-8), and in any case do not render the claimed subject matter unpatentable.

The Examiner's final statement of the rejection is the following (EA3):

> In view of the fatally defective disclosure, application of the prior art is not facilitated, however, all essential disclosed and claimed concepts are shown by the prior art. Chadima and Sakai teach the essential "flash" type system. Plural code reading is taught by the Knowles publication and Swartz (col. 5, line 9, et seq). Dobras teaches printed circuits, and Mcwaters [sic] teaches that Roms (or PROMS) associated with processors is garden variety for any desired use. (See fig. 4). Decision trees are ubiquitous computer program routines.

Thus, the ultimate statement of the rejection is based only on Dobras, McWaters, Sakai, Swartz '798, Chadima, and Knowles. We address this rejection accordingly and find it unnecessary to address whether the Symbol Memorandum and the Metrologic Product Manual are prior art.

Obviousness

The issue is whether the combination of references suggests a bar code reader that automatically determines the type of bar code and converts the representative code signal into a useable form regardless of the type of code without requiring the user to first identify the type of code being

read and without requiring the user to modify or manipulate the system in any way between successive readings, i.e., "auto-discrimination." Claim 15 recites a "bar code signal processor . . . for determining the type of bar code in said sensing region and for decoding the information contained in said bar code signal into a usable form." Claim 25 recites "circuitry including a microprocessor . . . for automatically discriminating between and identifying each of a plurality of code types . . . and resolving said electrical code signals into a usable form regardless of which one of said plurality of code types said electrical code signals represent." Claim 26 recites "said control circuitry completing the successive reading of each of a plurality of codes . . . without requiring any user input or modification to said portable code reading system between successive actuations."

The Examiner relies only on Knowles and Swartz '798 for the teaching of reading plural codes. We have reviewed Chadima, Sakai, Dobras, and McWaters and find no disclosure relevant to the issue of auto-discrimination.

Knowles discloses (page 14, left col.):

> Both the decode logic and the control logic described here may be programmed. This capability allows these

> scanners to be used for a wide variety of symbols; for example, the Distribution Symbol, the UPC symbol and its add-ons, or other types of linear-bar symbols.

Appellants argue that this merely suggests that laser scanners can be configured to read different code types, but does not teach a reader which automatically identifies and reads different code types (Br10). Appellants point to the Metrologic Product Manual having a revision date of October 1982, which is after the filing date of the ancestor application of the present application, and is six years after the Knowles article written by the founder and President of Metrologic, to show that the Metrologic reader required the user to manually configure the reader by selecting the code type (Br10-11).

Swartz '798 discloses (col. 5, lines 9-13):

> It will be expressly understood that the present invention can be utilized for analyzing symbol bar codes other than the UPC code. For example, the present invention can also be used to decode EAN, Codabar and other symbol codes.

Appellants argue that this merely suggests that laser scanners can be constructed to read different code types, but does not teach a reader which automatically identifies and reads different code types (Br13-14).

We agree that neither Knowles nor Swartz '798 teaches auto-discrimination. The ability to analyze different symbol bar codes does not mean that the different symbol bar codes are automatically discriminated; the bar code reader might be configured to read different codes by the user by pressing a key (e.g., Metrologic Product Manual) or other hardware (e.g., a switch). We note that the claims only require discrimination between two (i.e., "a plurality") of bar code types. There is no evidence in the applied references that there were bar code types that were so related that both were normally automatically discriminated by the bar code reader.

It appears to us, based on the declaration of Mr. Waite, that given the motivation to provide auto-discrimination, the solution would have been within the level of skill of one of ordinary skill in the art. That is, Mr. Waite states that he a person of ordinary skill in the bar code reading art (Waite declaration, para. 13) and that he drafted the software code at the direction of the inventors George E. Chadima, Jr. and Vadim Laser (Waite declaration, para. 2). Absent any sort of statement that Mr. Waite would not have known how to discriminate between the codes absent instructions from the

inventors, this appears to be an admission that writing the code to auto-discriminate would have been with the level of ordinary skill in the art. Nevertheless, what is still missing is the motivation in the prior art to automatically discriminate between codes.

For the reasons discussed above, the obviousness rejection of claims 15-26 is reversed.

CONCLUSION

The rejections of claims 15-26 are reversed.

REVERSED

LEE E. BARRETT Administrative Patent Judge	)	
MICHAEL R. FLEMING Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOSEPH L. DIXON Administrative Patent Judge	)	

Christopher C. Winslade
McANDREWS, HELD & MALLOY, LTD.
500 West Madison Street - 34th Floor
Chicago, IL 60661